

<221> VARIANT
 <222> (9)...(9)
 <223> Xaa is Arg, Asn, Asp, Glu or Gly

<221> VARIANT
 <222> (10)...(10)
 <223> Xaa is Gln, Leu or Gly

<221> VARIANT
 <222> (11)...(11)
 <223> Xaa is Ala, Trp or Tyr

<221> VARIANT
 <222> (12)...(12)
 <223> Xaa is Ala, Gly, His, Phe, Thr or Val

<221> VARIANT
 <222> (14)...(14)
 <223> Xaa is Asn, Gln, Phe, Ser or Val

<221> VARIANT
 <222> (15)...(15)
 <223> Xaa is Arg, Leu, Pro or Ser

<221> VARIANT
 <222> (16)...(16)
 <223> Xaa is Leu, Ser, Trp or Tyr

<400> 1
 Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa
 1 5 10 15

<210> 2
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Family of preferred CEA binding moieties

<221> VARIANT
 <222> 1
 <223> Xaa is Asn or Asp

<221> VARIANT
 <222> 6
 <223> Xaa is Phe, Met, Leu or Asn

<221> VARIANT
 <222> 7
 <223> Xaa is Asp, Gly, Ile, Lys, Phe or Thr

<221> VARIANT
 <222> 9
 <223> Xaa is Arg, Asn, Asp, Glu, Gly or Trp

<221> VARIANT
<222> 12
<223> Xaa is Ala, Gly, His, Phe, Thr, Tyr or Val

<221> VARIANT
<222> (15)...(15)
<223> Xaa is Arg, Leu, Pro or Ser

<221> VARIANT
<222> (16)...(16)
<223> Xaa is Leu, Ser, Trp or Tyr

<400> 2
Xaa Trp Val Cys Glu Xaa Xaa Lys Xaa Gln Trp Xaa Cys Asn Xaa Xaa
1 5 10 15

<210> 3
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA binding loop

<221> VARIANT
<222> 2
<223> Xaa is Asn, Glu or Met

<221> VARIANT
<222> 3
<223> Xaa is Asn, Leu, Met or Phe

<221> VARIANT
<222> 4
<223> Xaa is Asp, Gly, Ile, Lys, Phe or Thr

<221> VARIANT
<222> 5
<223> Xaa is Ala, Gln, Gly, Lys or Thr

<221> VARIANT
<222> 6
<223> Xaa is Arg, Asn, Asp, Glu or Gly

<221> VARIANT
<222> (7)...(7)
<223> Xaa is Gln, Gly or Leu

<221> VARIANT
<222> (8)...(8)
<223> Xaa is Ala, Trp or Tyr

<221> VARIANT
<222> (9)...(9)
<223> Xaa is Ala, Gly, His, Phe, Thr or Val

<400> 3

Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10

<210> 4

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 4

Asn Trp Val Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asn Ser Tyr
 1 5 10 15

<210> 5

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 5

Asp Trp Val Cys Glu Asn Lys Lys Asp Gln Trp Thr Cys Asn Leu Leu
 1 5 10 15

<210> 6

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 6

Asn Trp Asp Cys Met Phe Gly Ala Glu Gly Trp Ala Cys Ser Pro Trp
 1 5 10 15

<210> 7

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 7

Asp Trp Val Cys Glu Lys Thr Thr Gly Gly Tyr Val Cys Gln Pro Leu
 1 5 10 15

<210> 8
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA binding polypeptide

<400> 8
Asn Trp Phe Cys Glu Met Ile Gly Arg Gln Trp Gly Cys Val Pro Ser
1 5 10 15

<210> 9
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> CEA binding polypeptide

<400> 9
Asp Trp Val Cys Asn Phe Asp Gln Gly Leu Ala His Cys Phe Pro Ser
1 5 10 15

<210> 10
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Parental domain for design of microprotein display
library

<221> VARIANT
<222> (1)...(12)
<223> amino acid positions 4 and 9 are invariant Cys;
all other positions Xaa are varied but not Cys, to
provide a library of 2×10^8 different peptides
based on the template sequence

<221> VARIANT
<222> 1, 2, 3, 5, 6, 7, 8, 10, 11, 12
<223> Xaa = Any Amino Acid except Cys

<400> 10
Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa
1 5 10

<210> 11
<211> 11
<212> PRT
<213> Artificial Sequence

<220>

<223> Parental domain for design of microprotein display library

<221> VARIANT

<222> (1)...(11)

<223> amino acid positions 3 and 9 are invariant Cys; all other positions Xaa are varied but not Cys, to provide a library of 1×10^9 different peptides based on the template sequence

<221> VARIANT

<222> 1, 2, 4, 5, 6, 7, 8, 10, 11

<223> Xaa = Any Amino Acid except Cys

<400> 11

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
1 5 10

<210> 12

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Parental domain for design of microprotein display library

<221> VARIANT

<222> (1)...(12)

<223> amino acid positions 3 and 10 are invariant Cys; all other positions Xaa are varied but not Cys, to provide a library of 1×10^9 different peptides based on the template sequence

<221> VARIANT

<222> 1, 2, 4, 5, 6, 7, 8, 9, 11, 12

<223> Xaa = Any Amino Acid except Cys

<400> 12

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
1 5 10

<210> 13

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Parental domain for design of microprotein display library

<221> VARIANT

<222> (1)...(16)

<223> amino acid positions 4 and 13 are invariant Cys; all other positions Xaa are varied but not Cys, to

provide a library of 2.5×10^8 different peptides
based on the template sequence

<221> VARIANT

<222> 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16

<223> Xaa = Any Amino Acid except Cys

<400> 13

Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa
1				5					10					15	

<210> 14

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Variable sublibrary sequence used in designing
focused secondary library

<221> VARIANT

<222> (1)...(3)

<223> Xaa is any amino acid except Cys

<221> VARIANT

<222> (5)...(6)

<223> Xaa is any amino acid except Cys

<221> VARIANT

<222> 1, 2, 3, 5, 6

<223> Xaa = Any Amino Acid except Cys

<400> 14

Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Lys	Lys	Asp	Gln	Trp	Thr	Cys	Asn	Leu	Leu
1				5					10					15	

<210> 15

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Variable sublibrary sequence used in designing
focused secondary library

<221> VARIANT

<222> (5)...(9)

<223> Xaa is any amino acid except Cys

<221> VARIANT

<222> 5, 6, 7, 8, 9

<223> Xaa = Any Amino Acid except Cys

<400> 15
 Asp Trp Val Cys Xaa Xaa Xaa Xaa Xaa Gln Trp Thr Cys Asn Leu Leu
 1 5 10 15

<210> 16
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Variable sublibrary sequence used in designing
 focused secondary library

<221> VARIANT
 <222> (8)...(12)
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 8, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys

<400> 16
 Asp Trp Val Cys Glu Asn Lys Xaa Xaa Xaa Xaa Xaa Cys Asn Leu Leu
 1 5 10 15

<210> 17
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Variable sublibrary sequence used in designing
 focused secondary library

<221> VARIANT
 <222> (11)...(12)
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> (14)...(16)
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 11, 12, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

<400> 17
 Asp Trp Val Cys Glu Asn Lys Lys Asp Gln Xaa Xaa Cys Xaa Xaa Xaa
 1 5 10 15

<210> 18
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Variable sublibrary sequence used in designing
 focused secondary library

<221> VARIANT
 <222> (6)...(7)
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 9
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 12
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 15
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 6, 7, 9, 12, 15
 <223> Xaa = Any Amino Acid except Cys

<400> 18
 Asp Trp Val Cys Glu Xaa Xaa Lys Xaa Gln Trp Xaa Cys Asn Xaa Leu
 1 5 10 15

<210> 19
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Variable sublibrary sequence used in designing
 focused secondary library

<221> VARIANT
 <222> (5)...(7)
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 9
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 12
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 5, 6, 7, 9, 12
 <223> Xaa = Any Amino Acid except Cys

<400> 19
 Asn Trp Val Cys Xaa Xaa Xaa Lys Xaa Gln Trp Xaa Cys Asn Ser Tyr
 1 5 10 15

10/45

<210> 20
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Variable sublibrary sequence used in designing
 focused secondary library

<221> VARIANT
 <222> 1
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 3
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> (14)...(16)
 <223> Xaa is any amino acid except Cys

<221> VARIANT
 <222> 1, 3, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

<400> 20
 Xaa Trp Xaa Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Xaa Xaa Xaa
 1 5 10 15

<210> 21
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Isolate of TN10/9 library found not to bind CEA

<400> 21
 Asn Trp Arg Cys Lys Leu Phe Pro Arg Tyr Pro Tyr Cys Ser Ser Trp
 1 5 10 15

<210> 22
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Isolate of TN10/9 library found not to bind CEA

<400> 22
 Arg Tyr Cys Glu Phe Phe Pro Trp Ser Leu His Cys Gly Arg Pro
 1 5 10 15

11/45

<210> 23
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Conserved amino acid positions in first family of
CEA binding peptides

<221> VARIANT
<222> 6
<223> X is Asn, Leu, Met or Phe

<221> VARIANT
<222> 7
<223> X is Asp, Gly, Ile, Lys, Phe or Thr

<221> VARIANT
<222> 9
<223> X is Arg, Asn, Asp, Glu or Gly

<221> VARIANT
<222> 12
<223> X is Ala, Gly, His, Phe, Thr or Val

<221> VARIANT
<222> 15
<223> X is Arg, Leu, Pro or Ser

<400> 23
Asp Trp Val Cys Glu Xaa Xaa Lys Xaa Gln Trp Xaa Cys Asn Xaa Leu
1 5 10 15

<210> 24
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic CEA binding peptide with C-terminal
immobilization sequence

<400> 24
Ser Asn Trp Val Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asn Ser
1 5 10 15
Tyr Ala Pro Gly Gly Glu Gly Gly Gly Ser Lys
20 25

<210> 25
<211> 27
<212> PRT
<213> Artificial Sequence

12/45

<220>

<223> Synthetic CEA binding peptide with C-terminal immobilization sequence

<400> 25

Ser	Asp	Trp	Val	Cys	Glu	Asn	Lys	Lys	Asp	Gln	Trp	Thr	Cys	Asn	Leu
1				5					10					15	
Leu	Ala	Pro	Gly	Gly	Glu	Gly	Gly	Gly	Ser	Lys					
			20					25							

<210> 26

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic CEA binding peptide with C-terminal immobilization sequence

<400> 26

Ser	Asn	Trp	Asp	Cys	Met	Phe	Gly	Ala	Glu	Gly	Trp	Ala	Cys	Ser	Pro
1				5					10					15	
Trp	Ala	Pro	Gly	Gly	Glu	Gly	Gly	Gly	Ser	Lys					
			20					25							

<210> 27

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic CEA binding peptide with C-terminal immobilization sequence

<400> 27

Ser	Asp	Trp	Val	Cys	Glu	Leu	Thr	Thr	Gly	Gly	Tyr	Val	Cys	Gln	Pro
1				5					10					15	
Leu	Ala	Pro	Gly	Gly	Glu	Gly	Gly	Gly	Ser	Lys					
			20					25							

<210> 28

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> C-terminal sequence for immobilizing peptides

<400> 28

Ala	Pro	Gly	Gly	Glu	Gly	Gly	Gly	Ser	Lys
1				5				10	

13/45

<210> 29
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Template sequence for sublibrary used in
 construction of focused secondary display library

<221> VARIANT
 <222> (1)...(3)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> (5)...(6)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 1, 2, 3, 5, 6
 <223> Xaa = Any Amino Acid except Cys

<400> 29
 Xaa Xaa Xaa Cys Xaa Xaa Lys Lys Asp Gln Trp Thr Cys Asn Leu Leu
 1 5 10 15

<210> 30
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Template sequence for sublibrary used in
 construction of focused secondary display library

<221> VARIANT
 <222> (5)...(9)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 5, 6, 7, 8, 9
 <223> Xaa = Any Amino Acid except Cys

<400> 30
 Asp Trp Val Cys Xaa Xaa Xaa Xaa Xaa Gln Trp Thr Cys Asn Leu Leu
 1 5 10 15

<210> 31
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Template sequence for sublibrary used in
 construction of focused secondary display library

14/45

<221> VARIANT
 <222> (8)...(12)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 8, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys

<400> 31
 Asp Trp Val Cys Glu Asn Lys Xaa Xaa Xaa Xaa Xaa Cys Asn Leu Leu
 1 5 10 15

<210> 32
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Template sequence for sublibrary used in
 construction of focused secondary display library

<221> VARIANT
 <222> (11)...(12)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> (14)...(16)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 11, 12, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

<400> 32
 Asp Trp Val Cys Glu Asn Lys Lys Asp Gln Xaa Xaa Cys Xaa Xaa Xaa
 1 5 10 15

<210> 33
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Template sequence for sublibrary used in
 construction of focused secondary display library

<221> VARIANT
 <222> (6)...(7)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 9
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 12
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 15
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 6, 7, 9, 12, 15
 <223> Xaa = Any Amino Acid except Cys

<400> 33
 Asp Trp Val Cys Glu Xaa Xaa Lys Xaa Gln Trp Xaa Cys Asn Xaa Leu
 1 5 10 15

<210> 34
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Template sequence for sublibrary used in
 construction of focused secondary display library

<221> VARIANT
 <222> (5)...(7)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 9
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 12
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 5, 6, 7, 9, 12
 <223> Xaa = Any Amino Acid except Cys

<400> 34
 Asn Trp Val Cys Xaa Xaa Xaa Lys Xaa Gln Trp Xaa Cys Asn Ser Tyr
 1 5 10 15

<210> 35
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Template sequence for sublibrary used in
 construction of focused secondary display library

<221> VARIANT
 <222> 1
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 3
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> (14)...(16)
 <223> X is any amino acid except Cys

<221> VARIANT
 <222> 1, 3, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

<400> 35
 Xaa Trp Xaa Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Xaa Xaa Xaa
 1 5 10 15

<210> 36
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Family of CEA binding polypeptides

<221> VARIANT
 <222> 1
 <223> Xaa is Asp, Asn, Ala or Ile

<221> VARIANT
 <222> 3
 <223> Xaa is Val, Ile, Met, Tyr, Phe, Pro or Asp

<221> VARIANT
 <222> 5
 <223> Xaa is Asn, Glu or Asp

<221> VARIANT
 <222> 6
 <223> Xaa is Leu, Phe, Tyr, Trp, Val, Met, Ile or Asn

<221> VARIANT
 <222> 7
 <223> Xaa is Phe, Leu, Asp, Glu, Ala, Ile, Lys, Asn,
 Ser, Val, Trp or Tyr

<221> VARIANT
 <222> (8)...(8)
 <223> Xaa is Lys, Phe, Asp, Gly, Leu, Asn or Trp

<221> VARIANT
 <222> (9)...(9)
 <223> Xaa is Asn, Pro, Phe, Gly, Asp, Ala, Ser, Glu, Gln

or Trp

<221> VARIANT

<222> (10)...(10)

<223> Xaa is Gln or Lys

<221> VARIANT

<222> (12)...(12)

<223> Xaa is Phe, Thr, Met, Ser, Ala, Asn, Val, His,
Ile, Pro, Trp or Tyr

<221> VARIANT

<222> (14)...(14)

<223> Xaa is Asn, Asp, Glu, Pro, Gln or Ser

<221> VARIANT

<222> (15)...(15)

<223> Xaa is Val, Leu, Ile, Pro, Ala, Gln, Ser, Met,
Glu, Thr, Lys or Trp

<221> VARIANT

<222> (16)...(16)

<223> Xaa is Leu, Met, Val, Tyr, Ala, Ile, Trp, His,
Pro, Gln, Glu, Phe, Lys or Arg

<400> 36

Xaa Trp Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa Cys Xaa Xaa Xaa
1 5 10 15

<210> 37

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 37

Asp Trp Met Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Leu Met
1 5 10 15

<210> 38

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 38

Asp Trp Val Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Leu Met
1 5 10 15

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<210> 39
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 39
 Asp Trp Ile Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Gln Met
 1 5 10 15

<210> 40
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 40
 Asn Trp Ile Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Gln Glu
 1 5 10 15

<210> 41
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 41
 Asp Trp Ile Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Gln Val Lys
 1 5 10 15

<210> 42
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 42
 Asp Trp Val Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Val Met
 1 5 10 15

<210> 43
 <211> 16
 <212> PRT
 <213> Artificial Sequence

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<220>

<223> CEA binding polypeptide

<400> 43

Asp Trp Met Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Gln Ile
1 5 10 15

<210> 44

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 44

Ile Trp Asp Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Pro Ala Pro
1 5 10 15

<210> 45

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 45

Asp Trp Ile Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Ile Arg
1 5 10 15

<210> 46

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 46

Asp Trp Met Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Val Val
1 5 10 15

<210> 47

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 47

Asp Trp Ile Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Ala Ile
1 5 10 15

<210> 48

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 48

Asp Trp Ile Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Met Ala
1 5 10 15

<210> 49

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 49

Asp Trp Val Cys Glu Phe Leu Lys Met Gln Trp Ala Cys Asn Val Leu
1 5 10 15

<210> 50

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 50

Asp Trp Val Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asn Val Met
1 5 10 15

<210> 51

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CEA binding polypeptide

<400> 51

Ala Trp Pro Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Pro Pro Gln
1 5 10 15

21/45

<210> 52
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 52
 Asp Trp Val Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Val Leu
 1 5 10 15

<210> 53
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 53
 Asp Trp Val Cys Asn Leu Phe Lys Asn Gln Trp Phe Cys Asp Lys Trp
 1 5 10 15

<210> 54
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 54
 Asp Trp Val Cys Glu Trp Leu Lys Met Gln Trp Ala Cys Asn Met Leu
 1 5 10 15

<210> 55
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CEA binding polypeptide

<400> 55
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<220>

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<223> Synthetic 16-mer microprotein analogue

<400> 133

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<400> 134

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<210> 138

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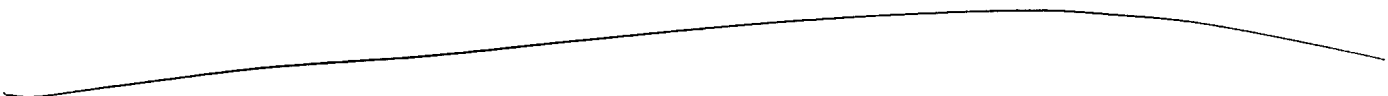
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A DOCPHOENIX

APPL PARTS

 IMIS
Internal Misc. Paper

 LET. ✓
Misc. Incoming Letter

 371P
PCT Papers in a 371 Application

 A...
Amendment Including Elections

 ABST
Abstract

 ADS
Application Data Sheet

 AF/D
Affidavit or Exhibit Received

 APPENDIX
Appendix

 ARTIFACT
Artifact

 BIB
Bib Data Sheet

 CLM
Claim

 COMPUTER
Computer Program Listing

 CRFL
All CRF Papers for Backfile

 DIST
Terminal Disclaimer Filed

 DRW
Drawings

 FOR
Foreign Reference

 FRPR
Foreign Priority Papers

 IDS
IDS Including 1449

 NPL
Non-Patent Literature

 OATH
Oath or Declaration

 PET.
Petition

 RETMAIL
Mail Returned by USPS

 SEQLIST
Sequence Listing

 SPEC
Specification

 SPEC NO
Specification Not in English

 TRNA
Transmittal New Application

 CTNF
Count Non-Final

 CTRS
Count Restriction

 EXIN
Examiner Interview

 M903
DO/EO Acceptance

 M905
DO/EO Missing Requirement

 NFDR
Formal Drawing Required

 NOA
Notice of Allowance

 PETDEC
Petition Decision

OUTGOING

 CTMS
Misc. Office Action

 1449
Signed 1449

 892
892

 ABN
Abandonment

 APDEC
Board of Appeals Decision

 APEA
Examiner Answer

 CTAV
Count Advisory Action

 CTEQ
Count Ex parte Quayle

 CTFR
Count Final Rejection

INCOMING

 AP.B
Appeal Brief

 C.AD
Change of Address

 N/AP
Notice of Appeal

 PA..
Change in Power of Attorney

 REM
Applicant Remarks in Amendment

 XT/
Extension of Time filed separate

Internal

 SRNT
Examiner Search Notes

 CLMPTO
PTO Prepared Complete Claim Set

 ECBOX
Evidence Copy Box Identification

 WCLM
Claim Worksheet

 WFEE
Fee Worksheet

File Wrapper

 FWCLM
File Wrapper Claim

 IIFW
File Wrapper Issue Information

 SRFW
File Wrapper Search Info

BACKFILE DOCUMENT INDEX SHEET